

protein or a fragment of said second STAT protein;

wherein said fragment of said first STAT protein comprises the N-terminal domain of said first STAT protein;

wherein said fragment of said second STAT protein comprises the N-terminal domain of said second STAT protein;

wherein the association is dependent upon the N-terminal domain of said first STAT protein, and the N-terminal domain of said second STAT protein; and

wherein a test compound which enhances the association is identified as a drug that enhances the interaction between adjacent activated STAT dimers, whereas a test compound that decreases the association is identified as a drug that inhibits the interaction between adjacent activated STAT dimers.

257. The method of Claim 56 wherein said first STAT protein is selected from the group consisting of STAT 1, STAT 2, STAT 3, STAT 4, STAT 5A, STAT 5B, and STAT 6.

358. The method of Claim 56 wherein said second STAT protein is selected from the group consisting of STAT 1, STAT 2, STAT 3, STAT 4, STAT 5A, STAT 5B, and STAT 6.

459. The method of Claim 56 wherein said first STAT protein and said second STAT protein are the same STAT protein.

60. A method for identifying a drug that modulates the ability of adjacent STAT protein dimers to interact and bind to adjacent DNA binding sites comprising:

- (a) determining the ability of a STAT protein or a fragment of the STAT protein to bind to a nucleic acid comprising two adjacent weak STAT DNA binding sites in the presence and absence of a test compound;
- (b) determining the ability of the STAT protein or fragment of the STAT protein to bind to a nucleic acid comprising a single strong STAT DNA binding site in the

presence and absence of a test compound;
wherein said STAT protein fragment comprises the N-terminal domain of said STAT protein; and wherein a test compound that increases binding in step (a) but not in step (b) is identified as a drug that enhances the interaction between adjacent activated STAT dimers, and a test compound that decreases binding in step (a) but not in step (b) is identified as a drug that inhibits the interaction between adjacent activated STAT dimers.

61. The method of Claim 60 wherein said STAT protein is selected from the group consisting of STAT 1, STAT 2, STAT 3, STAT 4, STAT 5A, STAT 5B, and STAT 6.

62. A method for identifying a drug that modulates the ability of adjacent STAT protein dimers to interact comprising measuring the ability of a test compound to modulate the association of a fragment of a first STAT protein with a second STAT protein or a fragment of said second STAT protein dimer;

wherein said fragment of said first STAT protein consists essentially of the N-terminal domain of said first STAT protein;

wherein said fragment of said second STAT protein comprises the N-terminal domain of said second STAT protein;

wherein the association is dependent upon the N-terminal domain of said first STAT protein, and the N-terminal domain of said second STAT protein; and

wherein a test compound which enhances the association is identified as a drug that enhances the interaction between adjacent activated STAT dimers, whereas a test compound that decreases the association is identified as a drug that inhibits the interaction between adjacent activated STAT dimers.

63. The method of Claim 62 wherein said first STAT protein is selected from the group consisting of STAT 1, STAT 2, STAT 3, STAT 4, STAT 5A, STAT 5B, and STAT 6.